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***Detailed Office Action***

1. The communication dated 12/06/2005 has been entered and fully considered.
2. Claims 1-12 are currently pending.

***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claim 8-11 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 15, 16, 17, 19, 20, 21, and 27 of copending Application No. 11/267833. Although the conflicting claims are not identical, they are not patentably distinct from each other because while both sets of claims teach a different intended use for the apparatus, it is the features of the apparatus itself that define patentability.

As for claims 8 and 11, claim 15 of the copending application claims a heating section before the drying section which the examiner has interpreted as a silo with an

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upper, middle, and lower part. A drying section equipped with a conveyor which the examiner has interpreted as the conveying means with a longitudinal lamella. The copending claim states before the drying section there is means for heating where the fluid flows downward which the examiner has interpreted as the intermediate part of the silo furnished with means for supplying fluid having an elevated temperature transversely. The copending claims does not state that the conveyor is tubular but there are a limited number of shapes that can be used (tubular, 4 sided straight walled) and therefore it would be *prima facie* obvious to try a different shape.

As for claims 9 and 10, in copending claim 27 it is stated that the hot fluid can be steam. In copending claim 16 and 17 it is stated that the fluid flows perpendicularly and is in the middle of the transferred material.

This is a provisional obviousness-type double patenting rejection.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 6, 8-10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent # 4,592,804 NOREUS et al., hereinafter NOREUS in view of U.S. Patent # 5,547,546 PROUGH et al., hereinafter PROUGH.

As for claim 1, NOREUS disclose a method for removing gases from lignocellulosic material [abstract], NOREUS disclose a gravimetric column (1) which can

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be heated from the bottom (6) and (7) and/or around the sides of the column (*composed in a gravitationally lowering column is heated to a degasification temperature with steam supplied essentially to traverse the column* [column 4 lines 1-12 and Figure 1]. The material is heated also by steam (2) and (8) where the material advances longitudinal bed (3) (*the heated material is directed to advance as a composed bed through a gas removal section, that-the temperature of the material bed is maintained at the degasification temperature in said gas removal section by introducing steam beneath the material bed* [Figure 1 and column 3 lines 50-55].

NOREUS explicitly discloses that the steaming process is for removing air from the chips by means of steaming [abstract, claim 1]. NOREUS discloses that the steaming removes the air from the chips but does not disclose how the air is removed from the material bed. PROUGH discloses a common chip bin and steaming vessel arrangement in which it shows that vent air can be separated from both the chip bin (25) and the material bed steaming vessel (14) and sent to a condenser and then an incinerator [Figure 1]. At the time of the invention it would have been obvious to a person of ordinary skill in the art remove the air of NOREUS from the material bed in the common and well know method of PROUGH. It is *prima facie* obvious to use a known technique to improve similar device in the same way. In the instant case it would be expected that the material bed of NOREUS would be improved by showing how the air can be removed during steaming.

As for claim 6, NOREUS discloses condensate outlet 12 for separating out condensate from the chips.

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*In claim 8, examiner notes for the record the applicant's use of the "consisting of" language of the claim. The language "consisting of" essentially limits the applicant's patent protection to **only** the features disclosed in the claim.*

As for claims 8, 9, 10, and 12, NOREUS discloses an apparatus with an upright silo(1) where chips are fed in through the upper part at the top (see arrow in figure) and a lower part connected to longitudinal vessel (3) *(the apparatus consisting of an upright silo (2) having an upper part and a lower part and an intermediate part there between, the upper part being furnished with means to receive the material to be treated, a longitudinal tubular vessel (1) positioned essentially horizontally and connected to the lower part of the silo for receiving the material from the silo [Figure 1]. The longitudinal vessel is said to have stoker (2) (for conveying the chips across longitudinally means (3) in the tubular vessel for transportation the material through said vessel [Figure 1, column 3 lines 23-26])*. NOREUS states that the silo can be furnished with additional steaming on the outside of the chip bin which would flow silo which is thus at a right angle to the chips flowing downward *(within the intermediate part is furnished with means (5,6,7,8,9) for supplying fluid having an elevated temperature to the material essentially transversally to the advancing direction of the material in the silo [column 4 lines 1-10]*.

NOREUS discloses that the longitudinal vessel is rectangular. Examiner has given the word tubular the definition of a hollow cylinder. However, NOREUS states that the vessel can be any cross-sectional area [column 3 lines 15-20]. Therefore it would

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have been obvious absent evidence of unexpected results to uses a tubular vessel. Further such tubular vessels are well known in the art such as the steaming vessel of PROUGH.

NOREUS discloses that the apparatus has an outlet for removing condensate (12) [Figure 1]. NOREUS explicitly discloses that the steaming process is for removing air from the chips by means of steaming [abstract, claim 1]. NOREUS discloses that the steaming removes the air from the chips but does not disclose how the air is removed from the material bed in the disclosed apparatus. PROUGH discloses a common chip bin and steaming vessel arrangement in which it shows that vent air can be separated from both the chip bin (25) and the material bed steaming vessel (14) and sent to a condenser and then an incinerator [Figure 1]. At the time of the invention it would have been obvious to a person of ordinary skill in the art remove the air of NOREUS from the material bed in the common and well know apparatus of PROUGH. It is *prima facie* obvious to use a known technique to improve similar device in the same way. In the instant case it would be expected that the material bed of NOREUS would improved by showing an apparatus for how the air can be removed during steaming.

7. Claims 2, 3, 4, 5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent # 4,592,804 NOREUS et al., hereinafter NOREUS in view of U.S. Patent # 5,547,546 PROUGH et al., hereinafter PROUGH, as applied to claim 1 above, and further in view of *Studies on Liquid Penetration into softwood chips –experiments, models and applications* by MALKOV.

As for claims 2, 3, and 5 NOREUS does not discloses the temperature of the steaming required to remove the air from the chips or the amount of time required to achieve fully remove air from the chips. MALKOV discloses that at a temperature of

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105 degrees C and a time of 60 minutes of steaming a chip can be fully penetrated with water and at a quicker time [Figures 24] which suggests that air has been removed from the chips [section 5.3] and that 60 minutes of steaming time removes virtually all of the air [Figure 25]. At the time of the invention it would have been obvious to a person of ordinary skill in the art to optimize the preheating temperature and time to obtain a full air removal from the chips which improves liquid penetration and to look towards MALKOV for guidance of typical temperatures and times. Further, it is *prima facie* obvious to use a known technique to improve similar devices in the same way. In the instant case it would have been expected that a temperature of 105 degrees C and a time of 60 minutes would remove the air from the chips.

As for claim 4, MALKOV discloses that chips can be fully heated to a degasification temperature of 100 degrees within 150 seconds [Figure 23].

As for claim 7, MALKOV discloses that at a temperature of 105 degrees C and a time of 60 minutes must be used to obtain full removal of the gases. The existence of condensate removal in NOREUS implies that the steam is saturated (superheated steam would not form condensate) and as such the pressure of the steam corresponds to the temperature of the steam.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent # 4,592,804 NOREUS et al., hereinafter NOREUS in view of U.S. Patent # 5,547,546 PROUGH et al., hereinafter PROUGH. as applied to claim 8 above, and further in view of U.S. Patent 5,063,981 JONKKA, hereinafter JONKKA.

PROUGH moves the material longitudinally with stoking means [column 3 lines 24-26]. JONKKA discloses a method for moving material horizontally wherein the

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material is conveyed on parallel transfer elements moving back and forth in the transfer direction. At the time of the invention it would have been *prima facie* obvious to substitute the stoker conveyance element of NOREUS with the parallel transfer element of JONKKA. It is *prima facie* obvious to substitute one known element for another to obtain predictable results. In the instant case it would be expected that the parallel transfer elements of NOREUS would serve to move the chips across the vessel of NOREUS.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J. CALANDRA whose telephone number is (571) 270-5124. The examiner can normally be reached on Monday through Thursday, 7:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven P. Griffin/  
Supervisory Patent Examiner, Art Unit  
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AJC